

Discontinuous Deformation Analysis in Rock Mechanics Practice: A Comprehensive Guide

By Lian Jing, Olof Stephansson, and Eric Nordlund

Discontinuous Deformation Analysis (DDA) is a powerful numerical method for simulating the behavior of rock masses. This book provides a comprehensive overview of DDA, from its theoretical foundations to its practical applications in rock mechanics. The book is divided into three parts:



Discontinuous Deformation Analysis in Rock Mechanics Practice (ISRM Book Series)

★★★★★ 5 out of 5

Language : English
File size : 13598 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Enhanced typesetting : Enabled
Print length : 410 pages



- **Part 1: Theoretical Foundations** introduces the basic concepts of DDA, including the theory of discontinuities, the constitutive laws for rock joints, and the numerical implementation of DDA.
- **Part 2: Practical Applications** presents a wide range of applications of DDA in rock mechanics, including slope stability analysis, tunnel design, and rockburst prediction.

- **Part 3: Case Studies** provides detailed case studies of the use of DDA in real-world rock mechanics projects.

Discontinuous Deformation Analysis in Rock Mechanics Practice is a valuable resource for researchers and practitioners in rock mechanics. The book provides a comprehensive overview of the theory and practice of DDA, and it is an essential reference for anyone working in this field.

Key Features

- Provides a comprehensive overview of the theory and practice of Discontinuous Deformation Analysis (DDA)
- Includes a wide range of applications of DDA in rock mechanics, including slope stability analysis, tunnel design, and rockburst prediction
- Presents detailed case studies of the use of DDA in real-world rock mechanics projects
- Written by leading experts in the field of DDA

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 - Constitutive Laws for Rock Joints
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- Tunnel Design
- Rockburst Prediction

- **Part 3: Case Studies**

- Case Study 1: Slope Stability Analysis of a Rock Cut
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- Case Study 3: Rockburst Prediction for a Deep Mine

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Reviews

"Discontinuous Deformation Analysis in Rock Mechanics Practice is a valuable resource for researchers and practitioners in rock mechanics. The book provides a comprehensive overview of the theory and practice of DDA, and it is an essential reference for anyone working in this field." -

Professor John Hudson, Imperial College London

"This book is a comprehensive and up-to-date overview of the theory and practice of Discontinuous Deformation Analysis (DDA). The authors have done an excellent job of presenting the material in a clear and concise manner, and the book is well-organized and easy to follow. I highly recommend this book to anyone interested in learning more about DDA." -

Professor Peter K. Kaiser, University of British Columbia

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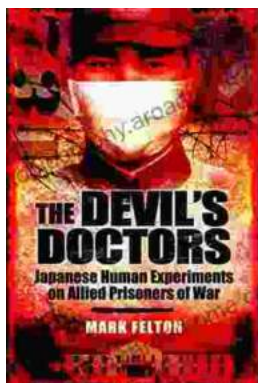
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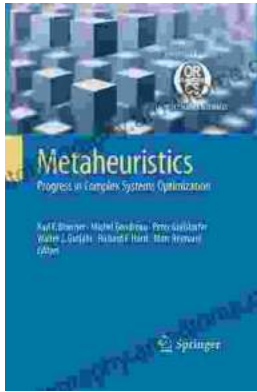
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